Height and diameter of roost tree, distance between daily roost sites, and distance from nest for juveniles differed significantly with age. Entire families roosted together on 37 occasions (22%).

Six juvenile owls occupied minimum area home ranges that averaged 33.4 ha in size (range, 12.3–60.4 ha). Four adult home ranges averaged 45.3 ha in size. Biweekly and cumulative home ranges of both adults and juveniles increased as post-fledging period progressed. Adult and juvenile home ranges did not differ significantly in size among families. Juvenile owls began to range more widely outside home ranges of their parents after about five weeks post-fledging, as evidenced by a smaller percentage of overlap in home ranges after this time.

Nine juvenile Eastern Screech-Owls remained on their natal territories for an average of 56 d (range, 45–65 d) after fledging. Dispersal dates ranged from 8–21 July 1985 ($\bar{x}$ = 14 July). Median straight-line dispersal distance was 1.8 km (range, 1.2–16.9 km). Median dispersal direction was 161 degrees (range, 141–306 degrees). There were no significant differences in dispersal distance or direction among families.

Juvenile mortality prior to dispersal was 10%. Five of six juveniles (83%) known to be alive following dispersal either starved or were killed by predators by March 1986. One juvenile male was known to have survived into the 1986 breeding season at which time it acquired a mate and nested. Four young hatched, but the nest was abandoned for unknown reasons. The young failed to fledge. **Belthoff, James R. 1987. M.Sc. Thesis, Department of Biological Sciences, Eastern Kentucky University, Richmond, KY 40475 U.S.A. Thesis Advisor: Gary Ritchison. Present address of author: Department of Biological Sciences, Clemson University, Clemson, SC 29634, U.S.A.**

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THE FEEDING, ROOSTING, AND PERCHING BEHAVIOR OF THE BALD EAGLES (*Haliaeetus leucocephalus*) OF MASON NECK, VIRGINIA WITH SPECIAL REFERENCE TO THE DEVELOPMENT OF MASON NECK STATE PARK

The feeding, roosting and perching behavior of Bald Eagles on Mason Neck, Virginia, were studied with special reference to effects from development of Mason Neck State Park. Observations were begun in January 1981 and continued into 1985.

Most eagle feeding activity was observed when wind speeds were <16 km/hr and temp was 18–26°C, although hunting success was not found to be dependent on wind speed, temp, or cloud cover. Eagles were observed to use four main hunting methods: 1) swooping from flight, 2) swooping from a tree perch, 3) wading from shore and grabbing with the beak or talons, and 4) gliding out from ice or a low perch on piles of ice. The last two methods were only used by adult eagles, but the frequency of use and success rates of methods one and two were independent of age. Few inter- and intraspecific interactions were seen in feeding areas, likely due to the fact that neither eagles nor their prey species were found in highly concentrated numbers. Observations of feeding and analysis of prey remains and pellets (N = 82) indicated that diet of the eagles was composed of 53.7% fish [mostly Brown Bullhead (*Ictalurus nebulosus*)], 9.8% mammals [mostly Eastern Cottontail (*Sylvilagus floridanus*)], 28% birds, 6.1% turtles and 2.5% crayfish.

Roost trees selected by eagles were typical in that they were fairly large with a strong, open branching structure, easily accessible, had good visibility and were close to water and feeding areas. Roost trees measured (N = 22) had a mean (±SD) diameter at breast height (DBH) of 54.4 cm (± 27.4), height of 18.9 m (± 5.5) and distance from water of 12.4 m (±17.7).

Weekly roost counts showed that the numbers of eagles using the roost peaked between September and April with only a few birds using the roost during summer. Annual peak counts of eagles using the roost ranged from nine to 20 with highest numbers occurring in November, December and January. Color band numbers identified some of the eagles as coming from specific localities; 24 from the Chesapeake Bay Region of Virginia and Maryland, two from Maine, two from New York, and one from South Carolina. Many interactions were seen between immature eagles, the majority age group in the roost. Incidents of potential human disturbance in the roost are discussed.

Perch trees were found to be similar to roost trees in dimensions, but their mean distance from water was less. Eagles perched in 36% of all sightings exclusive of the roost. Interactions of birds perched in feeding and breeding areas are described.

A certain amount of tolerance to human activity was shown by eagles on Mason Neck, but caution must be maintained to protect sensitive areas such as roost and nesting territory from adverse human disturbance. Recommendations are made to the state park to restrict human use near the roost site. **Haines, Susan L. 1986. M.Sc. Thesis, Biology Department, George Mason University, Fairfax, VA 22030, U.S.A. Present address: 107 Beaver Lodge Road, Stafford, VA 22554, U.S.A.**